

Transforming Maintenance through Digitalization



Our presenters



Terje Lindrupsen
Digital Maintenance Lead
Yggdrasil

Aker BP



Martin Hasle
Project manager &
Advisor

Lighthouse

World-class oil and gas portfolio

Large scale, low risk assets on the Norwegian Continental Shelf

2P reserves¹

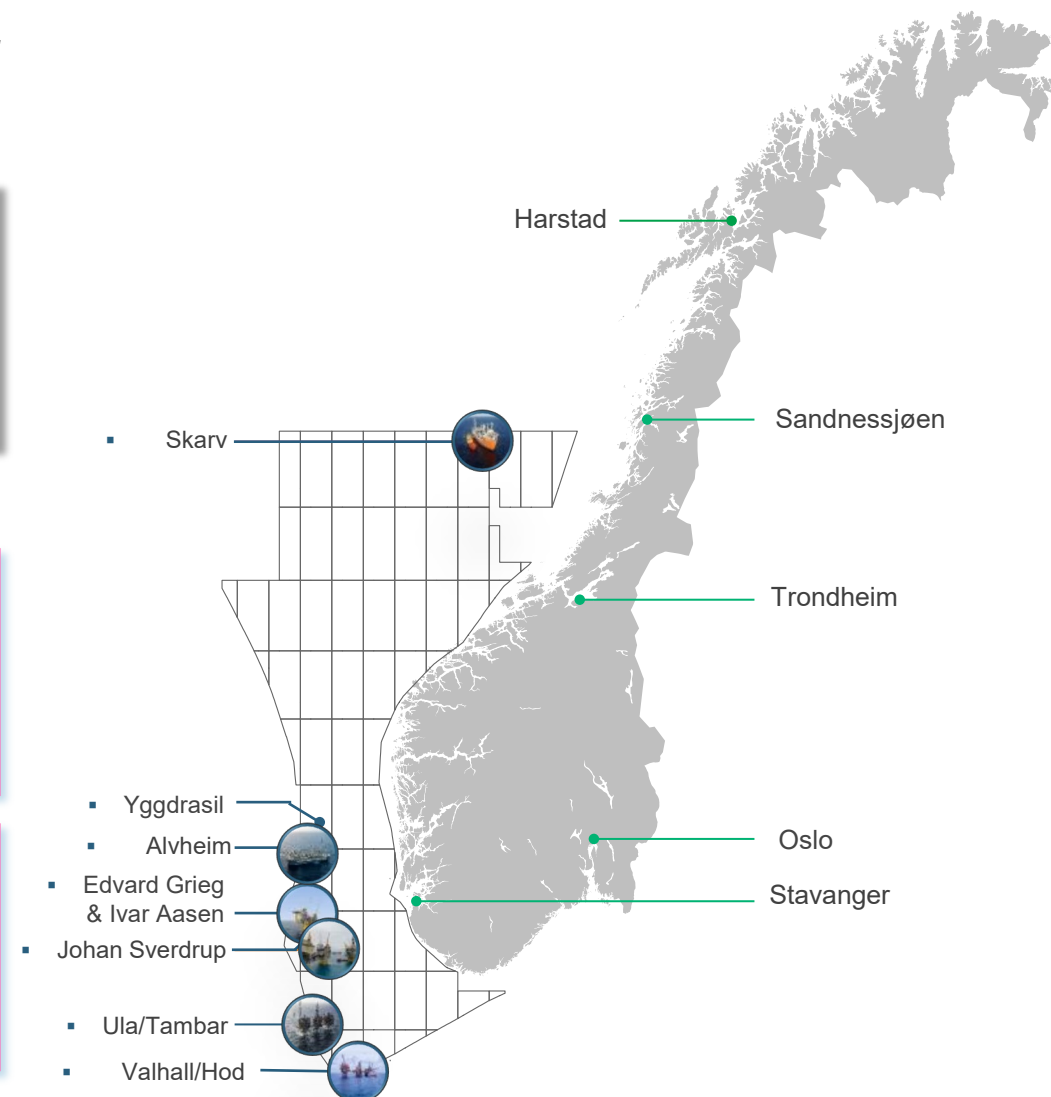
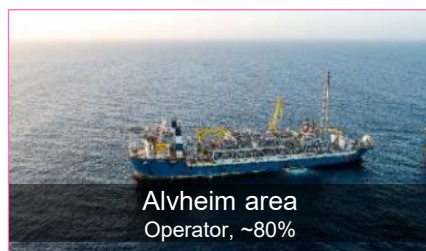
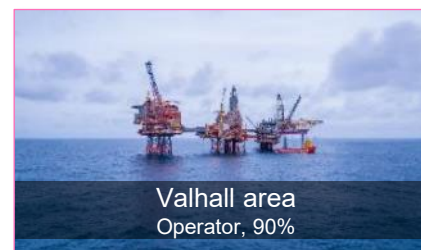
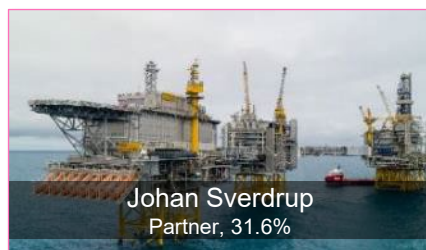
1.72bn
boe

2C resources¹

0.81bn
boe

Production²

444
mboepd



Future operations – modernising and digitalising the way we work



**Integration of
new concepts**



**Integrated
Operation Centres**



**New cooperation
models**



**Remote operations and
maintenance**



New ways of working



**Data-driven
decisions**



**Increased digital
competence for all**



Automation

About Lighthouse



Intelligent Asset Management specialists

A proven track record delivering innovative and efficient services and solutions to many of the largest corporations in Norway.

Application development for SAP APM and EAM

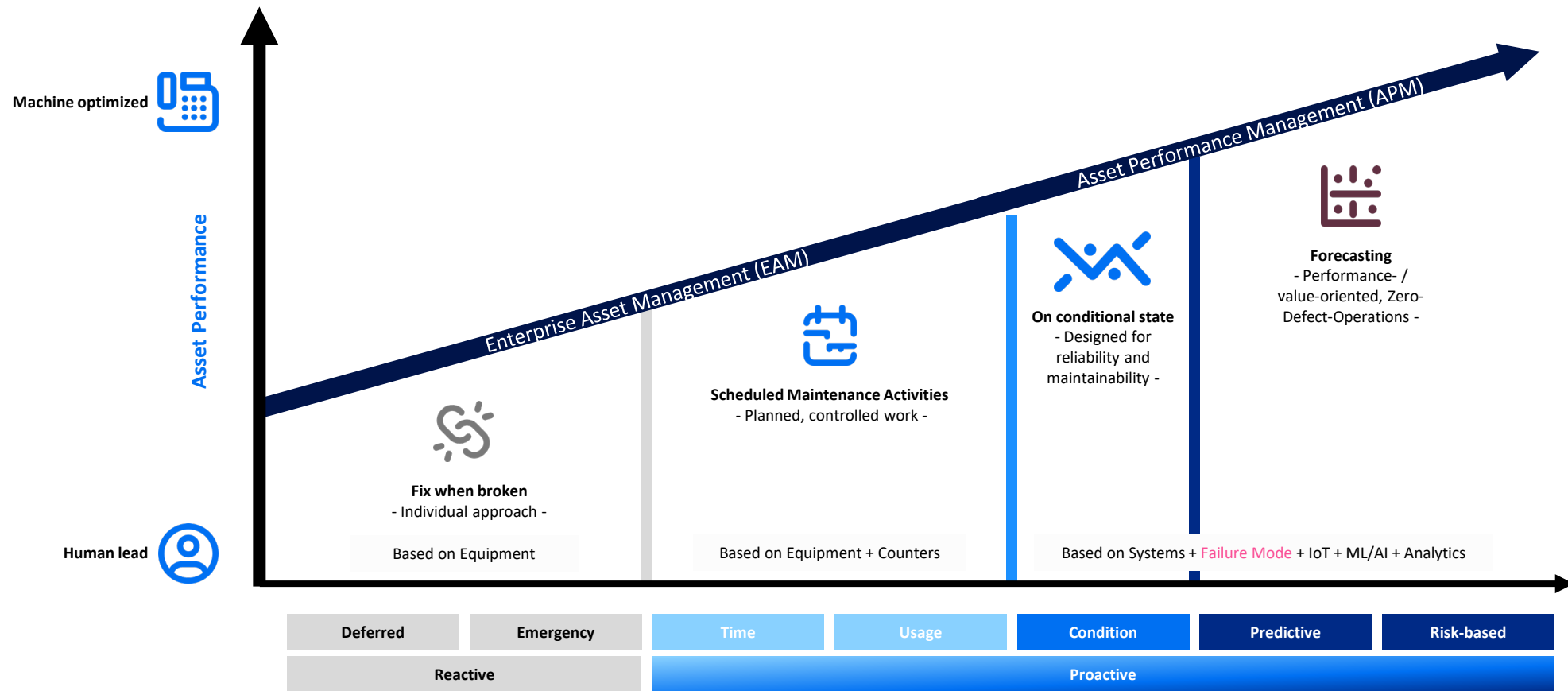
Our own *Lighthouse Apps* provide powerful and efficient additions and extensions to standard APM and EAM functionality.

A trusted partner for your digital journey

Our experienced team offers expert advisory-, project management- and business consulting services

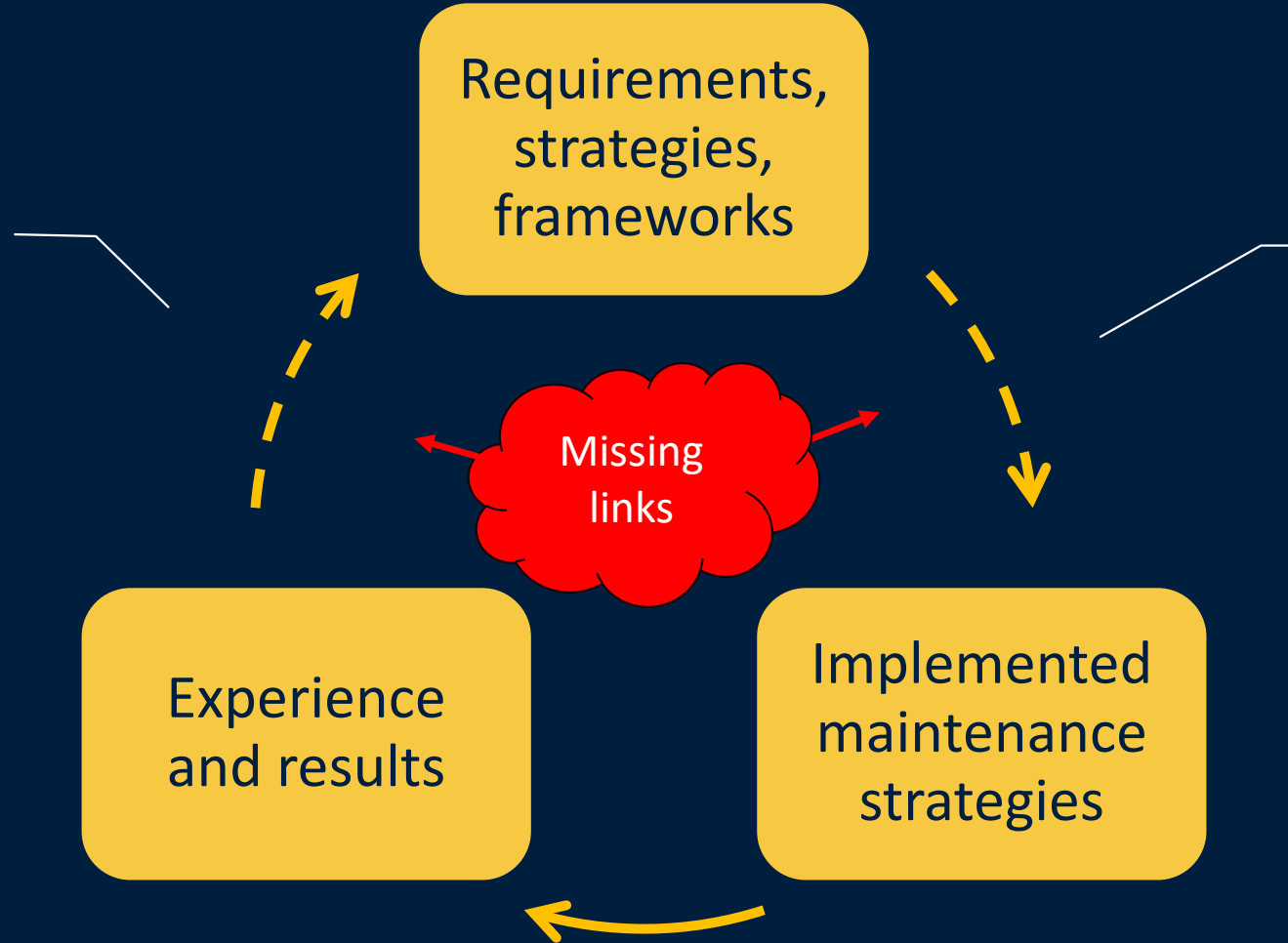
Maintenance Management Maturity Model

Focus on Asset Performance by managing Maintenance on Failure-Mode Level



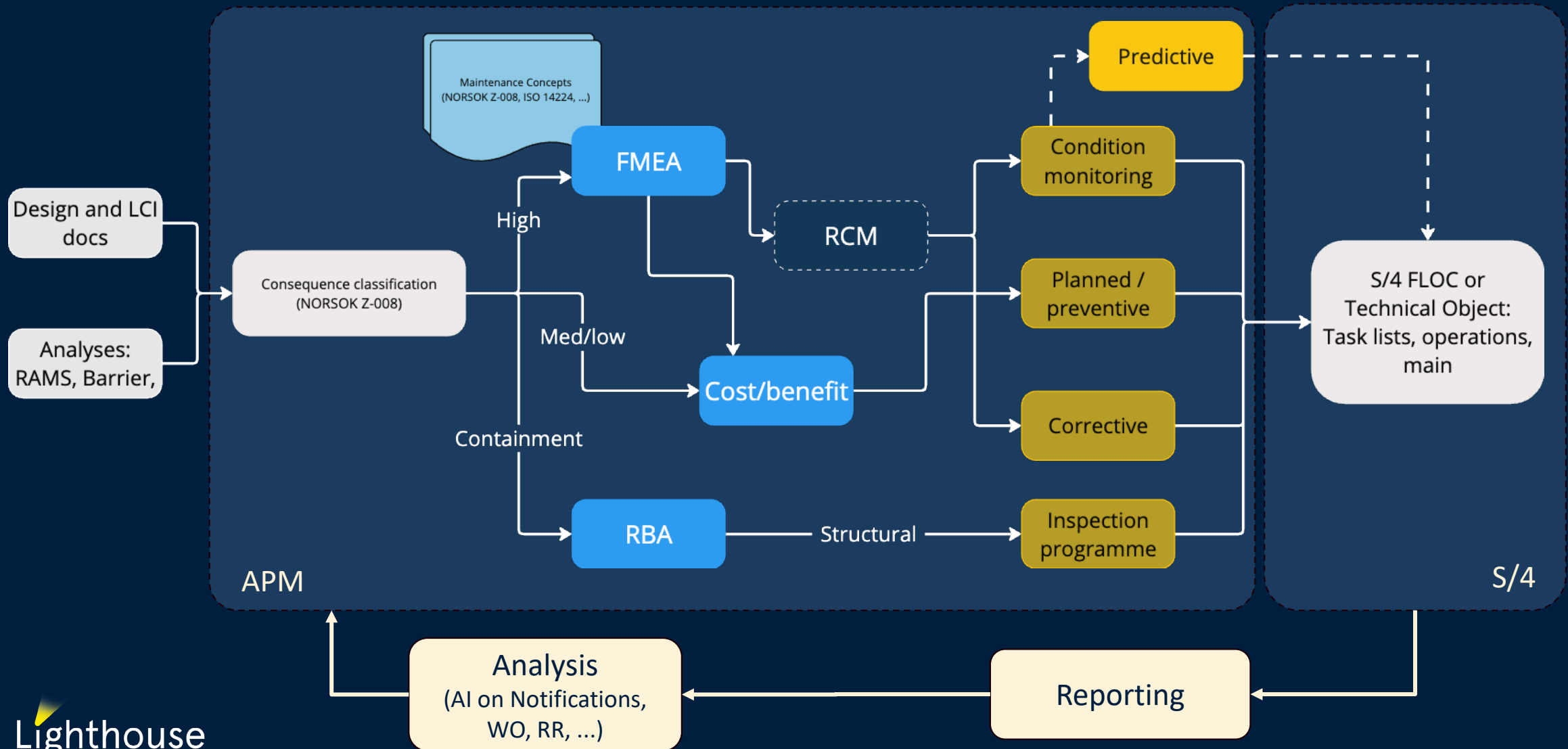
APM – From strategy to execution

- Track decisions and activities across the lifecycle of an asset
- Bring strategies closer to the implementation



- Measure and assess the effectiveness of maintenance per eq. group, failure mode, failure cause, etc.
- «Close the loop»

APM – From strategy to execution



Maintenance strategies implemented in APM

Strategy Implementation Overview



Maintenance plant overview MTC overview

Overview				See all strategies
Maintenance plant Id	Maintenance plant	Strategy Info	Technical objects	
6010	Valhall PH	See strategies Total: 200 Implemented: 50 Left to implement: 50 100% <div></div>	See technical objects Total: 1000 Implemented: 700 Left to implement: 500 70% <div></div>	
8101	Ivar Aasen Offshore	See strategies Total: 200 Implemented: 50 Left to implement: 50 100% <div></div>	See technical objects Total: 1000 Implemented: 700 Left to implement: 500 70% <div></div>	
8301	Edvard Grieg Offshore	See strategies Total: 200 Implemented: 50 Left to implement: 50 100% <div></div>	See technical objects Total: 1000 Implemented: 700 Left to implement: 500 70% <div></div>	

Maintenance strategies implemented in APM

[Overview](#) / [Strategies](#) /

Asset Specific MTC Strategies

Planning Plant:

Maintenance Plant:

MTC description:

Class:

Failure mode:

Status:

Asset Strategies												<div><div>↑</div><div>↓</div><div>≡</div><div>⚙</div></div>
Planning plant ID	Planning plant	Maintenance plant ID	Maintenance plant	MTC description	MTC ID	Class	Function failure	Failure mode	Task No	Status	AltStatus	
6000	Valhall MPP	6010	Valhall PH	Electric Motors	6	EM	Fails to convert electrical energy int...	LOO	C1, I2, O1, T1	TASKS_SELECTED	<div><div>✔</div><div>—</div><div>—</div><div>—</div><div>—</div></div>	>
6000	Valhall MPP	6010	Valhall PH	Electric Motors	6	EM	Fails to convert electrical energy int...	VIB	C1, C2, I2, M1, O1, T2	TASKS_SELECTED	<div><div>✔</div><div>—</div><div>—</div><div>—</div><div>—</div></div>	>
8101	Ivar Aasen Offshore	8101	Ivar Aasen Offshore	Centrifugal, Positive Displacement and Submersible Pumps	14	PU-PA-CEN	Fails to transfer fluid at all	BRD	C1, M1, O1	TASKS_SELECTED	<div><div>⊘</div><div>—</div><div>—</div><div>—</div><div>—</div></div>	>
8101	Ivar Aasen Offshore	8101	Ivar Aasen Offshore	Centrifugal, Positive Displacement and Submersible Pumps	14	PU-PA-CEN	Fails to transfer fluid at all	VIB	C1, M1, M11, M3, M4, M6, O1	TASKS_SELECTED	<div><div>⊘</div><div>—</div><div>—</div><div>—</div><div>—</div></div>	>
8101	Ivar Aasen Offshore	8101	Ivar Aasen Offshore	Electric Motors	6	EM	Fails to convert electrical energy int...	OHE	C1, I1, I2, O1	TASKS_SELECTED	<div><div>✔</div><div>—</div><div>—</div><div>—</div><div>—</div></div>	>
6000	Valhall MPP	6010	Valhall PH	Electric Motors	6	EM	Fails to convert electrical energy int...	FTS	I2, T4	TASKS_SELECTED	<div><div>✔</div><div>—</div><div>—</div><div>—</div><div>—</div></div>	>
8101	Ivar Aasen Offshore	8101	Ivar Aasen Offshore	Centrifugal, Positive Displacement and Submersible Pumps	14	PU-PA-CEN	Fails to transfer fluid at all	FTS	C1, O1	OPEN	<div><div>○</div><div>—</div><div>—</div><div>—</div><div>—</div></div>	>
8101	Ivar Aasen Offshore	8101	Ivar Aasen Offshore	Centrifugal, Positive Displacement and Submersible Pumps	14	PU-PA-CEN	Fails to transfer fluid at all	LOO	C1, M10, M2, M3	OPEN	<div><div>○</div><div>—</div><div>—</div><div>—</div><div>—</div></div>	>
8101	Ivar Aasen Offshore	8101	Ivar Aasen Offshore	Electric Motors	6	EM	Fails to convert electrical energy int...	VIB	C1, C2, I2, M1, O1, T2	OPEN	<div><div>○</div><div>—</div><div>—</div><div>—</div><div>—</div></div>	>
6000	Valhall MPP	6010	Valhall PH	Electric Motors	6	EM	Fails to convert electrical energy int...	UST	No Tasks	OPEN	<div><div>○</div><div>—</div><div>—</div><div>—</div><div>—</div></div>	>
8301	Edvard Grieg Offshore	8301	Edvard Grieg Offshore	Electric Motors	6	EM	Fails to convert electrical energy int...	VIB	C1, C2, I2, M1, O1, T2	OPEN	<div><div>○</div><div>—</div><div>—</div><div>—</div><div>—</div></div>	>
6000	Valhall MPP	6010	Valhall PH	Electric Motors	6	EM	Fails to convert electrical energy int...	OHE	C1, I1, I2, O1	OPEN	<div><div>○</div><div>—</div><div>—</div><div>—</div><div>—</div></div>	>
8301	Edvard Grieg Offshore	8301	Edvard Grieg Offshore	Electric Motors	6	EM	Fails to convert electrical energy int...	OHE		OPEN	<div><div>○</div><div>—</div><div>—</div><div>—</div><div>—</div></div>	>
8101	Ivar Aasen Offshore	8101	Ivar Aasen Offshore	Electric Motors	6	EM	Fails to convert electrical energy int...	FTS		OPEN	<div><div>○</div><div>—</div><div>—</div><div>—</div><div>—</div></div>	>
8101	Ivar Aasen Offshore	8101	Ivar Aasen Offshore	Centrifugal, Positive Displacement and Submersible Pumps	14	PU-PA-CEN	Fails to transfer fluid at all	OHE		OPEN	<div><div>○</div><div>—</div><div>—</div><div>—</div><div>—</div></div>	>
8101	Ivar Aasen Offshore	8101	Ivar Aasen Offshore	Electric Motors	6	EM	Fails to convert electrical energy int...	UST		OPEN	<div><div>○</div><div>—</div><div>—</div><div>—</div><div>—</div></div>	>
8101	Ivar Aasen Offshore	8101	Ivar Aasen Offshore	Electric Motors	6	EM	Fails to convert electrical energy int...	LOO		OPEN	<div><div>○</div><div>—</div><div>—</div><div>—</div><div>—</div></div>	>
8301	Edvard Grieg Offshore	8301	Edvard Grieg Offshore	Electric Motors	6	EM	Fails to convert electrical energy int...	LOO		OPEN	<div><div>○</div><div>—</div><div>—</div><div>—</div><div>—</div></div>	>
8301	Edvard Grieg Offshore	8301	Edvard Grieg Offshore	Electric Motors	6	EM	Fails to convert electrical energy int...	UST		OPEN	<div><div>○</div><div>—</div><div>—</div><div>—</div><div>—</div></div>	>
8301	Edvard Grieg Offshore	8301	Edvard Grieg Offshore	Electric Motors	6	EM	Fails to convert electrical energy int...	FTS		OPEN	<div><div>○</div><div>—</div><div>—</div><div>—</div><div>—</div></div>	>

Maintenance strategies implemented in APM

Overview / Strategies / Tasks /

Low output

Valhall PH

Change state

MTC:

MTC ID:

Class: EM

Function failure: Fails to convert electrical energy into rotational mechanical power

Status

OPEN

Tasks

MTC references

Task list

Select tasks	Task No	Task	Task details	Mesuring point (barriers)	CRW (barriers)	Interval	Task justification	Comments	Related failure causes
	C1	Condition and Performance Monitoring	May include vibration-, temperature-, pressure measurement, power measurements.	N/A	NO	See comment	Ref. FMEA	For low critical equipment human monitoring on operato...	
	I2	Detailed inspection and service	See chapter 2.2.2	N/A	NO	36 months (HV motors) 48 months (LV and VS motors)	Ref. FMEA	Extent of inspection depends on motor type. Inspection ...	
	O1	Daily monitoring	Monitor for noise, vibration and technical condition on operator rounds.Check level of lubrication, temperature, pressure, top up if required.	N/A	NO	Daily	Ref. FMEA	Extent of task depends on the motor.	
	T1	Windings test	Continuity, insulation resistance and polarization index test (where applicable) of windings	N/A	Yes	24 months (HV motors) 48 months (LV and VS motors)	Ref. FMEA	Can be performed as non-intrusive.	

“

“The vision is to achieve a maintenance strategy dominated by intelligent automatic actions and significantly **reduced human interventions**.

In plain words: The Equipment and systems tells us **when** and **how** it needs to be maintained.”





 AkerBP
CBM Hub

Enabled by SAP APM



CBM Hub: Simplified functionality

Sensors & Specialist systems



Pressure



Temperature



Flow



Calculation



SAP 4/Hana

- Notifications
- Work Orders
- Documented CBM strategies

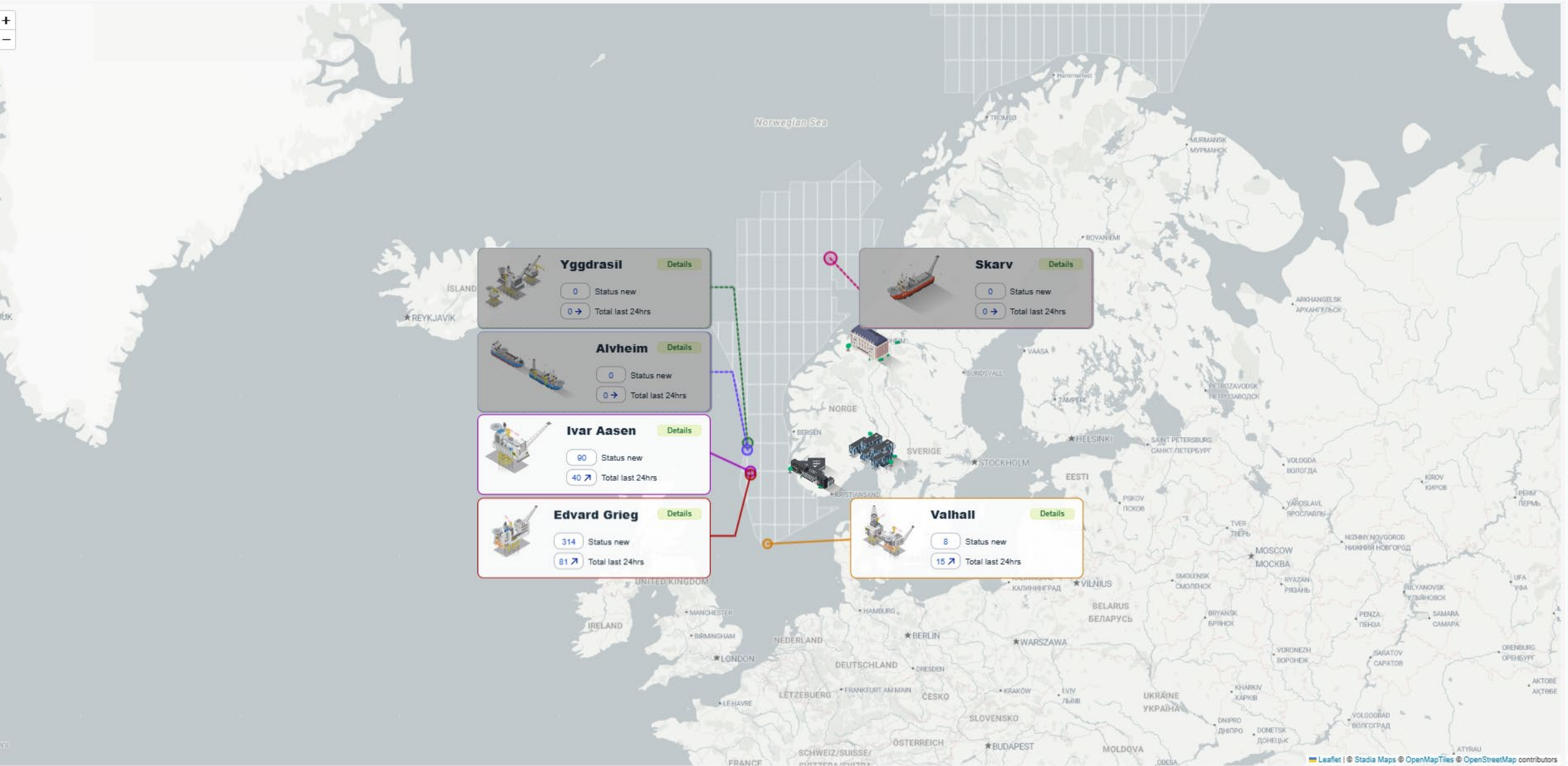
- Algorithms & Rules Configuration
 - Thresholds/limits
 - LCI data
- Charts & results
- Alert Monitoring & Management
- Statistics & Trend

CBM Hub: Enabling end to end maintenance

From signal in the field to work order execution



The CBM Hub enables end-to-end maintenance by facilitating automated workflows from field sensors to executed maintenance tasks—efficiently, seamlessly, and at scale.



Standard

Maintenance Plant:

Technical Object:

Alert type:

Status:

Severity:

Origin:

Last Occured On:

Occurred On:

Go

Adapt Filters

Alerts: 75

<input type="checkbox"/>	Plant Hierarchy	Technical Object Desc	Current State	Last Occured On	Origin	Status	Alert	Notification	Notification Description	Work Order	Alert Type	Object Type	Object Type Desc	Severity	Occurred
<input type="checkbox"/>	IAA-13PT1012	D2 WTR INJ TO WH		17.10.2024 - 15:30:06	Rule	New	Input Device - Deviation Threshold Exceeded				IP-Deviation-Alert	IP-PT	PRESSURE TRANSMITTER	Error	17.10.2024
<input type="checkbox"/>	IAA-63PT3106	Utløpsstrykk regenereringsvarmer		17.10.2024 - 15:21:38	Rule	New	Input Device Out-of-Range Exceeded				IP_Out-Of-Range_Alert	IP-PT	PRESSURE TRANSMITTER	Error	17.10.2024
<input type="checkbox"/>	IAA-13PT1012	D2 WTR INJ TO WH		17.10.2024 - 15:30:05	Rule	In Process	Input Device - Deviation Threshold Exceeded V1	400122137	RULE: Transmit. pair Deviation exceeded		IP-Deviation-Alert-V1	IP-PT	PRESSURE TRANSMITTER	Information	16.10.2024
<input type="checkbox"/>	IAA-43FT1147	FLR GAS RCV PKG OUT		17.10.2024 - 15:22:27	Rule	New	Input Device Out-of-Range Exceeded				IP_Out-Of-Range_Alert	IP-FT	FLOW TRANSMITTER	Error	16.10.2024
<input type="checkbox"/>	IAA-13PT1012	D2 WTR INJ TO WH		16.10.2024 - 19:03:05	Rule	In Process	Input Device - Deviation Threshold Exceeded V1	400122134	RULE: Transmit. pair Deviation exceeded	200062655	IP-Deviation-Alert-V1	IP-PT	PRESSURE TRANSMITTER	Information	16.10.2024
<input type="checkbox"/>	IAA-77FT1503	BATTERY ROOM EXTRACT FANS		17.10.2024 - 14:22:34	Rule	New	Input Device Out-of-Range Exceeded				IP_Out-Of-Range_Alert	IP-FT	FLOW TRANSMITTER	Error	16.10.2024
<input type="checkbox"/>	IAA-50FT1004	SWTR LIFT PMP A DISCH		17.10.2024 - 15:22:42	Rule	New	Input Device Out-of-Range Exceeded				IP_Out-Of-Range_Alert	IP-FT	FLOW TRANSMITTER	Error	16.10.2024
<input type="checkbox"/>	IAA-13TT1922	D14 DIHOLE MOTRG		17.10.2024 - 15:22:26	Rule	New	Input Device Out-of-Range Exceeded				IP_Out-Of-Range_Alert	IP-TT	TEMP TRANSMITTER	Error	16.10.2024
<input type="checkbox"/>	IAA-13TT1970	D14 DIHOLE MOTRG		17.10.2024 - 15:22:40	Rule	New	Input Device Out-of-Range Exceeded				IP_Out-Of-Range_Alert	IP-TT	TEMP TRANSMITTER	Error	16.10.2024
<input type="checkbox"/>	IAA-13PT1964	D14 DIHOLE MOTRG		17.10.2024 - 14:22:07	Rule	New	Input Device - Freeze/Flatlining				IP_Freeze_Alert	IP-PT	PRESSURE TRANSMITTER	Error	16.10.2024
<input type="checkbox"/>	IAA-63PT3106	Utløpsstrykk regenereringsvarmer		17.10.2024 - 04:02:15	Rule	New	Input Device Out-of-Range Exceeded				IP_Out-Of-Range_Alert	IP-PT	PRESSURE TRANSMITTER	Error	16.10.2024
<input type="checkbox"/>	IAA-71TT3162	FWP DSL A GEN W		17.10.2024 - 15:21:26	Rule	New	Input Device - Freeze/Flatlining				IP_Freeze_Alert	IP-TT	TEMP TRANSMITTER	Error	16.10.2024
<input type="checkbox"/>	IAA-43FT1147	FLR GAS RCV PKG OUT		16.10.2024 - 18:42:09	Rule	New	Input Device Out-of-Range Exceeded				IP_Out-Of-Range_Alert	IP-FT	FLOW TRANSMITTER	Error	15.10.2024
<input type="checkbox"/>	IAA-77FT1503	BATTERY ROOM EXTRACT FANS		16.10.2024 - 17:42:11	Rule	New	Input Device Out-of-Range Exceeded				IP_Out-Of-Range_Alert	IP-FT	FLOW TRANSMITTER	Error	15.10.2024
<input type="checkbox"/>	IAA-13TT1970	D14 DIHOLE MOTRG		16.10.2024 - 17:03:47	Rule	New	Input Device Out-of-Range Exceeded				IP_Out-Of-Range_Alert	IP-TT	TEMP TRANSMITTER	Error	15.10.2024
<input type="checkbox"/>	IAA-13PT1012	D2 WTR INJ TO WH		16.10.2024 - 16:15:06	Rule	In Process	Input Device - Deviation Threshold Exceeded	400122103	Input Device - Deviation Threshold Excee		IP-Deviation-Alert	IP-PT	PRESSURE TRANSMITTER	Error	15.10.2024
<input type="checkbox"/>	IAA-71TT3161	FWP DSL A GEN V		17.10.2024 - 15:21:11	Rule	New	Input Device - Freeze/Flatlining				IP_Freeze_Alert	IP-TT	TEMP TRANSMITTER	Error	15.10.2024
<input type="checkbox"/>	IAA-29TT3071	SWTR INJ MTR NDE		17.10.2024 - 14:02:43	Rule	New	Input Device - Freeze/Flatlining				IP_Freeze_Alert	IP-TT	TEMP TRANSMITTER	Error	15.10.2024
<input type="checkbox"/>	IAA-42PT3249	42PD0011A HDR		15.10.2024 - 04:26:29	API	New	External Alert				externalAlert_info	IP-PT	PRESSURE TRANSMITTER	Information	15.10.2024
<input type="checkbox"/>	IAA-63PT3106	Utløpsstrykk regenereringsvarmer		16.10.2024 - 04:03:11	Rule	New	Input Device Out-of-Range Exceeded				IP_Out-Of-Range_Alert	IP-PT	PRESSURE TRANSMITTER	Error	15.10.2024
<input type="checkbox"/>	IAA-42PT3565	H2S SCAVENGER - MULTIDOSING CABINET		17.10.2024 - 15:24:06	Rule	New	Input Device - Freeze/Flatlining				IP_Freeze_Alert	IP-PT	PRESSURE TRANSMITTER	Error	15.10.2024
<input type="checkbox"/>	IAA-29PT3103	UF INLET HEADER PRESSURE		17.10.2024 - 15:02:24	Rule	New	Input Device - Freeze/Flatlining				IP_Freeze_Alert	IP-PT	PRESSURE TRANSMITTER	Error	14.10.2024
<input type="checkbox"/>	IAA-42FT3350	SCL INHIB A - MLTDO5 CAB		15.10.2024 - 08:04:26	Rule	New	Input Device Out-of-Range Exceeded				IP_Out-Of-Range_Alert	IP-FT	FLOW TRANSMITTER	Error	14.10.2024
<input type="checkbox"/>	IAA-43FT1147	FLR GAS RCV PKG OUT		15.10.2024 - 18:42:12	Rule	New	Input Device Out-of-Range Exceeded				IP_Out-Of-Range_Alert	IP-FT	FLOW TRANSMITTER	Error	14.10.2024
<input type="checkbox"/>	IAA-77FT1503	BATTERY ROOM EXTRACT FANS		15.10.2024 - 17:41:27	Rule	New	Input Device Out-of-Range Exceeded				IP_Out-Of-Range_Alert	IP-FT	FLOW TRANSMITTER	Error	14.10.2024
<input type="checkbox"/>	IAA-50FT1004	SWTR LIFT PMP A DISCH		15.10.2024 - 17:03:04	Rule	New	Input Device Out-of-Range Exceeded				IP_Out-Of-Range_Alert	IP-FT	FLOW TRANSMITTER	Error	14.10.2024
<input type="checkbox"/>	IAA-13TT1970	D14 DIHOLE MOTRG		15.10.2024 - 16:43:41	Rule	New	Input Device Out-of-Range Exceeded				IP_Out-Of-Range_Alert	IP-TT	TEMP TRANSMITTER	Error	14.10.2024
<input type="checkbox"/>	IAA-13TT1922	D14 DIHOLE MOTRG		15.10.2024 - 16:41:32	Rule	New	Input Device Out-of-Range Exceeded				IP_Out-Of-Range_Alert	IP-TT	TEMP TRANSMITTER	Error	14.10.2024
<input type="checkbox"/>	IAA-13PT1012	D2 WTR INJ TO WH		15.10.2024 - 16:30:13	Rule	In Process	Input Device - Deviation Threshold Exceeded	400122101	Trasmitter pair Deviation exceeded	200062654	IP-Deviation-Alert	IP-PT	PRESSURE TRANSMITTER	Error	14.10.2024
<input type="checkbox"/>	IAA-13PT3805	D17 ICV COMMON RETURN		17.10.2024 - 15:24:09	Rule	New	Input Device - Freeze/Flatlining				IP_Freeze_Alert	IP-PT	PRESSURE TRANSMITTER	Error	14.10.2024
<input type="checkbox"/>	IAA-63PT3106	Utløpsstrykk regenereringsvarmer		15.10.2024 - 03:42:38	Rule	New	Input Device Out-of-Range Exceeded				IP_Out-Of-Range_Alert	IP-PT	PRESSURE TRANSMITTER	Error	14.10.2024
<input type="checkbox"/>	IAA-42FT3350	SCL INHIB A - MLTDO5 CAB		14.10.2024 - 20:42:49	Rule	New	Input Device Out-of-Range Exceeded				IP_Out-Of-Range_Alert	IP-FT	FLOW TRANSMITTER	Error	13.10.2024
<input type="checkbox"/>	IAA-43FT1147	FLR GAS RCV PKG OUT		14.10.2024 - 18:22:55	Rule	New	Input Device Out-of-Range Exceeded				IP_Out-Of-Range_Alert	IP-FT	FLOW TRANSMITTER	Error	13.10.2024

LT - Transmitter Pair Deviation Alert

IP_LT_TRANSMITTER_PAIR_DEVIATION

Create Notification

Change Status

DETAILS

ADDITIONAL ALERT DATA

Indicator Chart

Transmitter Pair Comparison

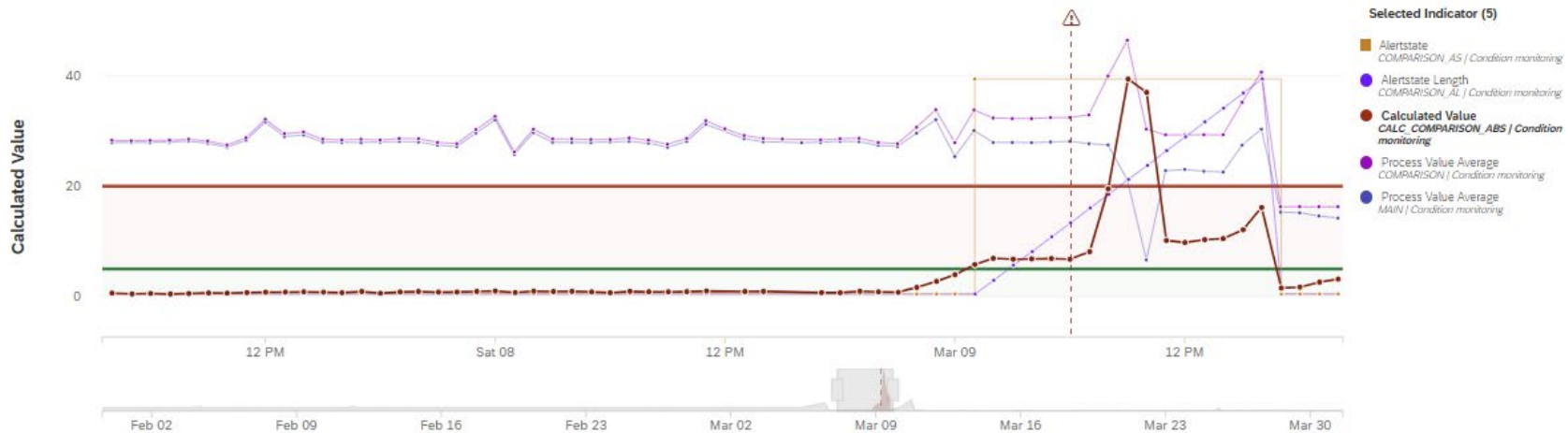
Duration

Past 2 Month(s)

Select Indicators



Last refreshed at: 2:48 PM



ADDITIONAL ALERT DATA

Comments

Enter comment...

Submit

Links

Aveva

Technical Object

Master app

Crew Log

Aize

Standard

Maintenance Plant:Technical Object:Alert type:Status:Severity:Origin:Last Occured On:Occured On:

SearchNew xIn Process x10.10.2024 - 17.10.202410.10.2024 - 17.10.2024GoAdapt Filters

Alerts: 75

Plant Hierarchy	Technical Object Desc	Current State	Last Occured On	Origin	Status	Alert	Notification	Notification Description	Work Order	Alert Type	Object Type	Object Type Desc	Severity	Occured On
IAA-13PT1012	D2 WTR INJ TO WH		17.10.2024 - 15:30:06	Rule	New	Input Device - Deviation Threshold Exceeded				IP-Deviation-Alert	IP-PT	PRESSURE TRANSMITTER	Error	17.10.2024
IAA-63PT3106	Utlapstrykk regenereringsvarmer		17.10.2024 - 15:21:38	Rule	New	Input Device Out-of-Range Exceeded				IP_Out-Of-Range_Alert	IP-PT	PRESSURE TRANSMITTER	Error	17.10.2024
IAA-13PT1012	D2 WTR INJ TO WH		17.10.2024 - 15:30:05	Rule	In Process	Input Device - Deviation Threshold Exceeded V1	400122137	RULE: Transmit. pair Deviation exceeded		IP-Deviation-Alert-V1	IP-PT	PRESSURE TRANSMITTER	Information	16.10.2024
IAA-43FT1147	FLR GAS RCV PKG OUT		17.10.2024 - 15:22:27	Rule	New	Input Device Out-of-Range Exceeded				IP_Out-Of-Range_Alert	IP-FT	FLOW TRANSMITTER	Error	16.10.2024
IAA-13PT1012	D2 WTR INJ TO WH		16.10.2024 - 19:03:05	Rule	In Process	Input Device - Deviation Threshold Exceeded V1	400122134	RULE: Transmit. pair Deviation exceeded	200062655	IP-Deviation-Alert-V1	IP-PT	PRESSURE TRANSMITTER	Information	16.10.2024
IAA-77FT1503	BATTERY ROOM EXTRACT FANS									IP_Out-Of-Range_Alert	IP-FT	FLOW TRANSMITTER	Error	16.10.2024
IAA-50FT1004	SWTR LIFT PMP A DISCH										IP-FT	FLOW TRANSMITTER	Error	16.10.2024
IAA-13TT1922	D14 DIHOLE MOTRG										IP-TT	TEMP TRANSMITTER	Error	16.10.2024
IAA-13TT1970	D14 DIHOLE MOTRG										IP-TT	TEMP TRANSMITTER	Error	16.10.2024
IAA-13PT1964	D14 DIHOLE MOTRG										IP-PT	PRESSURE TRANSMITTER	Error	16.10.2024
IAA-63PT3106	Utlapstrykk regenereringsvarmer										IP-PT	PRESSURE TRANSMITTER	Error	16.10.2024
IAA-71TT3162	FWP DSL A GEN W										IP-TT	TEMP TRANSMITTER	Error	16.10.2024
IAA-43FT1147	FLR GAS RCV PKG OUT										IP-FT	FLOW TRANSMITTER	Error	15.10.2024
IAA-77FT1503	BATTERY ROOM EXTRACT FANS										IP-FT	FLOW TRANSMITTER	Error	15.10.2024
IAA-13TT1970	D14 DIHOLE MOTRG										IP-TT	TEMP TRANSMITTER	Error	15.10.2024
IAA-13PT1012	D2 WTR INJ TO WH										IP-PT	PRESSURE TRANSMITTER	Error	15.10.2024
IAA-71TT3161	FWP DSL A GEN V										IP-TT	TEMP TRANSMITTER	Error	15.10.2024
IAA-29TT3071	SWTR INJ MTR NDE										IP-TT	TEMP TRANSMITTER	Error	15.10.2024
IAA-42PST3249	42PD0011A HDR										IP-PT	PRESSURE TRANSMITTER	Information	15.10.2024
IAA-63PT3106	Utlapstrykk regenereringsvarmer										IP-PT	PRESSURE TRANSMITTER	Error	15.10.2024
IAA-42PT3565	H2S SCAVENGER - MULTIDOSING CABINET										IP-PT	PRESSURE TRANSMITTER	Error	14.10.2024
IAA-29PT3103	UF INLET HEADER PRESSURE										IP-FT	FLOW TRANSMITTER	Error	14.10.2024
IAA-42FT3350	SCL INHIB A - MLTDOOS CAB										IP-FT	FLOW TRANSMITTER	Error	14.10.2024
IAA-43FT1147	FLR GAS RCV PKG OUT										IP-FT	FLOW TRANSMITTER	Error	14.10.2024
IAA-77FT1503	BATTERY ROOM EXTRACT FANS										IP-FT	FLOW TRANSMITTER	Error	14.10.2024
IAA-50FT1004	SWTR LIFT PMP A DISCH										IP-FT	FLOW TRANSMITTER	Error	14.10.2024
IAA-13TT1970	D14 DIHOLE MOTRG		15.10.2024 - 16:43:41	Rule	New	Input Device Out-of-Range Exceeded				IP_Out-Of-Range_Alert	IP-TT	TEMP TRANSMITTER	Error	14.10.2024
IAA-13TT1922	D14 DIHOLE MOTRG		15.10.2024 - 16:41:32	Rule	New	Input Device Out-of-Range Exceeded				IP_Out-Of-Range_Alert	IP-TT	TEMP TRANSMITTER	Error	14.10.2024
IAA-13PT1012	D2 WTR INJ TO WH		15.10.2024 - 16:30:13	Rule	In Process	Input Device - Deviation Threshold Exceeded	400122101	Trasmitter pair Deviation exceeded	200062654	IP-Deviation-Alert	IP-PT	PRESSURE TRANSMITTER	Error	14.10.2024
IAA-13PT3805	D17 ICV COMMON RETURN		17.10.2024 - 15:24:09	Rule	New	Input Device - Freeze/Fatlining				IP_Freeze_Alert	IP-PT	PRESSURE TRANSMITTER	Error	14.10.2024
IAA-63PT3106	Utlapstrykk regenereringsvarmer		15.10.2024 - 09:42:38	Rule	New	Input Device Out-of-Range Exceeded				IP_Out-Of-Range_Alert	IP-PT	PRESSURE TRANSMITTER	Error	14.10.2024
IAA-42FT3350	SCL INHIB A - MLTDOOS CAB		14.10.2024 - 20:42:49	Rule	New	Input Device Out-of-Range Exceeded				IP_Out-Of-Range_Alert	IP-FT	FLOW TRANSMITTER	Error	13.10.2024
IAA-43FT1147	FLR GAS RCV PKG OUT		14.10.2024 - 18:22:55	Rule	New	Input Device Out-of-Range Exceeded				IP_Out-Of-Range_Alert	IP-FT	FLOW TRANSMITTER	Error	13.10.2024

Create Notification

WO 200062655

Notification HandlerEPL - Create notification

RULE: Transmit. pair Deviation exceeded

400122134Created On: 16.10.2024Status: NOPR ORAS DEVN TBAR

Notification Type: CB Condition Based MainCreated By: Z-R-QAE-IAM

General

Problem De...

Attachments

Assessment

Transmitter Pair Deviation exceeded. Act as per activities in Task List derived from Alert in APM to Notification/Work Order. Corresponding Transmitter: IAA-13PST1027 Difference in Transmitter Pair Readings: 0.697789 Time in Alert State: 31.0

Create new notification

Create 5 Whys

EditCancel

https://apm-approuter-responsive-llama-ua.cfapps.eu10-004.hana.ondemand.com/akerbpapmlandingpage/index.html#

Ingestion items

Showing: 14934 of 14934

Maintenance Plant:

Active:

Technical object:

Query:

Source:

Schedule:

Go

Adapt Filters

Table type

Normal

Multi select

Search

Search

Create new

Black...

Technical ob...

Modified by

Modified

Source

Query

Schedule

Position

Category

Characteris...

Resolution

Granularity

Offset

ALV-02PIT9502

terje.lindrupsen@akerbp.com

3/28/2025, 10:59:54 ...

PI

ALV_02PIT9502/Y/1mMID

60 min, Sta...

MAIN

Condition ...

Process Va...

Average

5

ALV-02PIT9503

terje.lindrupsen@akerbp.com

3/28/2025, 10:59:55 ...

PI

ALV_02PIT9503/Y/1mMID

60 min, Sta...

MAIN

Condition ...

Process Va...

Average

5

ALV-02PIT9504

terje.lindrupsen@akerbp.com

3/28/2025, 10:59:55 ...

PI

ALV_02PIT9504/Y/1mMID

60 min, Sta...

MAIN

Condition ...

Process Va...

Average

5

ALV-02PIT9505

terje.lindrupsen@akerbp.com

3/28/2025, 10:59:56 ...

PI

ALV_02PIT9505/Y/1mMID

60 min, Sta...

MAIN

Condition ...

Process Va...

Average

5

ALV-02PIT9506

terje.lindrupsen@akerbp.com

3/28/2025, 10:59:56 ...

PI

ALV_02PIT9506/Y/1mMID

60 min, Sta...

MAIN

Condition ...

Process Va...

Average

5

ALV-02PIT9507

terje.lindrupsen@akerbp.com

3/28/2025, 10:59:56 ...

PI

ALV_02PIT9507/Y/1mMID

60 min, Sta...

MAIN

Condition ...

Process Va...

Average

5

ALV-02PIT9508

terje.lindrupsen@akerbp.com

3/28/2025, 10:59:57 ...

PI

ALV_02PIT9508/Y/1mMID

60 min, Sta...

MAIN

Condition ...

Process Va...

Average

5

ALV-02PIT9509

terje.lindrupsen@akerbp.com

3/28/2025, 10:59:57 ...

PI

ALV_02PIT9509/Y/1mMID

60 min, Sta...

MAIN

Condition ...

Process Va...

Average

5

ALV-02PIT9510

terje.lindrupsen@akerbp.com

3/28/2025, 10:59:58 ...

PI

ALV_02PIT9510/Y/1mMID

60 min, Sta...

MAIN

Condition ...

Process Va...

Average

5

ALV-02PIT9511

terje.lindrupsen@akerbp.com

3/28/2025, 10:59:58 ...

PI

ALV_02PIT9511/Y/1mMID

60 min, Sta...

MAIN

Condition ...

Process Va...

Average

5

ALV-02PIT9512

terje.lindrupsen@akerbp.com

3/28/2025, 10:59:58 ...

PI

ALV_02PIT9512/Y/1mMID

60 min, Sta...

MAIN

Condition ...

Process Va...

Average

5

ALV-02PIT9513

terje.lindrupsen@akerbp.com

3/28/2025, 10:59:59 ...

PI

ALV_02PIT9513/Y/1mMID

60 min, Sta...

MAIN

Condition ...

Process Va...

Average

5

ALV-02PIT9514

terje.lindrupsen@akerbp.com

3/28/2025, 10:59:59 ...

PI

ALV_02PIT9514/Y/1mMID

60 min, Sta...

MAIN

Condition ...

Process Va...

Average

5

ALV-02PIT9515

terje.lindrupsen@akerbp.com

3/28/2025, 11:00:00 ...

PI

ALV_02PIT9515/Y/1mMID

60 min, Sta...

MAIN

Condition ...

Process Va...

Average

5

ALV-02PIT9516

terje.lindrupsen@akerbp.com

3/28/2025, 11:00:02 ...

PI

ALV_02PIT9516/Y/1mMID

60 min, Sta...

MAIN

Condition ...

Process Va...

Average

5

ALV-02PIT9517

terje.lindrupsen@akerbp.com

3/28/2025, 11:00:03 ...

PI

ALV_02PIT9517/Y/1mMID

60 min, Sta...

MAIN

Condition ...

Process Va...

Average

5

ALV-02PIT9518

terje.lindrupsen@akerbp.com

3/28/2025, 11:00:03 ...

PI

ALV_02PIT9518/Y/1mMID

60 min, Sta...

MAIN

Condition ...

Process Va...

Average

5

ALV-02PIT9519

terje.lindrupsen@akerbp.com

3/28/2025, 11:00:04 ...

PI

ALV_02PIT9519/Y/1mMID

60 min, Sta...

MAIN

Condition ...

Process Va...

Average

5

ALV-02PIT9520

terje.lindrupsen@akerbp.com

3/28/2025, 11:00:04 ...

PI

ALV_02PIT9520/Y/1mMID

60 min, Sta...

MAIN

Condition ...

Process Va...

Average

5

ALV-02PIT9521

terje.lindrupsen@akerbp.com

3/28/2025, 11:00:04 ...

PI

ALV_02PIT9521/Y/1mMID

60 min, Sta...

MAIN

Condition ...

Process Va...

Average

5

ALV-02PIT9522

terje.lindrupsen@akerbp.com

3/28/2025, 11:00:05 ...

PI

ALV_02PIT9522/Y/1mMID

60 min, Sta...

MAIN

Condition ...

Process Va...

Average

5

ALV-02PIT9523

terje.lindrupsen@akerbp.com

3/28/2025, 11:00:05 ...

PI

ALV_02PIT9523/Y/1mMID

60 min, Sta...

MAIN

Condition ...

Process Va...

Average

5

ALV-02PIT9524

terje.lindrupsen@akerbp.com

3/28/2025, 11:00:06 ...

PI

ALV_02PIT9524/MeasA/1m...

60 min, Sta...

MAIN

Condition ...

Process Va...

Average

5

ALV-02PIT9525

terje.lindrupsen@akerbp.com

3/28/2025, 11:00:06 ...

PI

ALV_02PIT9525/Y/1mMID

60 min, Sta...

MAIN

Condition ...

Process Va...

Average

5

ALV-02PIT9526

terje.lindrupsen@akerbp.com

3/28/2025, 11:00:07 ...

PI

ALV_02PIT9526/MeasA/1m...

60 min, Sta...

MAIN

Condition ...

Process Va...

Average

5

ALV-02PIT9527

terje.lindrupsen@akerbp.com

3/28/2025, 11:00:07 ...

PI

ALV_02PIT9527/Y/1mMID

60 min, Sta...

MAIN

Condition ...

Process Va...

Average

5

ALV-02PIT9528

terje.lindrupsen@akerbp.com

3/28/2025, 11:00:08 ...

PI

ALV_02PIT9528/MeasA/1m...

60 min, Sta...

MAIN

Condition ...

Process Va...

Average

5

ALV-02PIT9529

terje.lindrupsen@akerbp.com

3/28/2025, 11:00:08 ...

PI

ALV_02PIT9529/Y/1mMID

60 min, Sta...

MAIN

Condition ...

Process Va...

Average

5

ALV-02PIT9530

terje.lindrupsen@akerbp.com

3/28/2025, 11:00:09 ...

PI

ALV_02PIT9530/Y/1mMID

60 min, Sta...

MAIN

Condition ...

Process Va...

Average

5

ALV-02PT9010

terje.lindrupsen@akerbp.com

3/28/2025, 11:00:09 ...

PI

ALV_02PT9010/Y/PRIM

60 min, Sta...

MAIN

Condition ...

Process Va...

Average

5

ALV-02PIT9507

DIID: 7d769708-3a6e-4020-8b56-847e0e5fb27a

Created: 3/28/2025, 10:59:56 AM

Created by: terje.lindrupsen@akerbp.com

Modified: 3/28/2025, 10:59:56 AM

Modified by: terje.lindrupsen@akerbp.com

Overview

Settings

At a glance

Aggregated

Ingestion item

Source

Resolution

Schedule

PI

Average

60 min, Start at 40 min

Last 24 Hrs

Last value ingested at

Actual values ingested

Missing datapoints

1:40:00 PM

27

0

Last 24 hrs of posts absorbed into APM

These are values that are confirmed received in APM

Last 24 hours

Last 6 hours

Last hour

Timestamp

Value

Timestamp: 11:40

Value: 224.2

Last messages

Last 24 hrs of log messages

Info

Warning

Error

0

0

0

No items are currently available

Refresh data

Save changes

Deactivate

Delete

Page 10 of 10

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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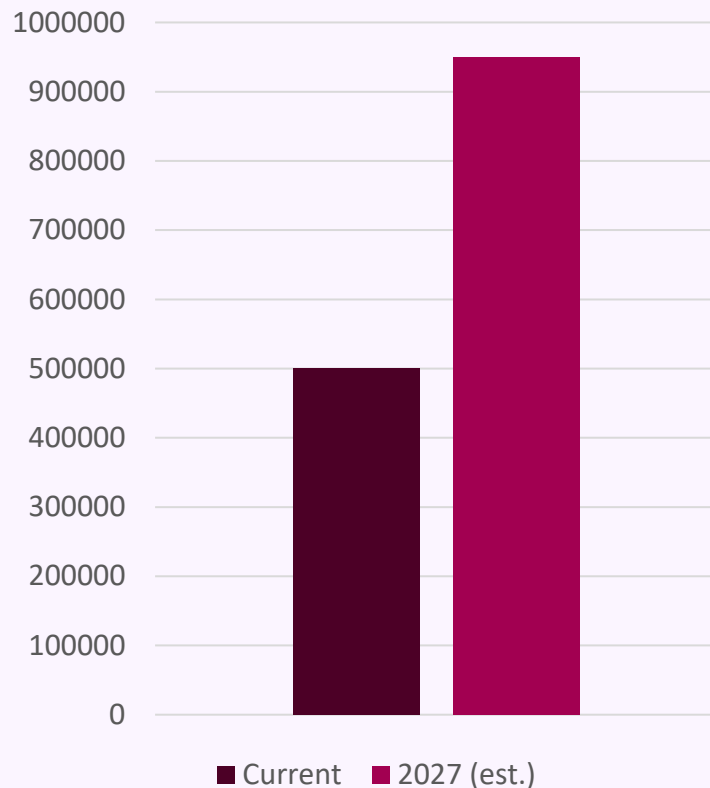
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CBM Hub at a glance

Scaling up towards 2027

Technical Objects

As part of our APM solution

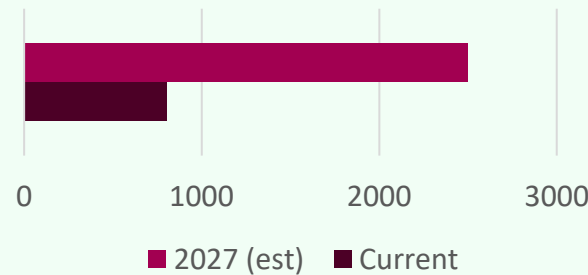


External systems

25 +

Across multiple fields supported by dynamic datasets

Transmitter pairs



PI & CDF Ingestion items / hrs

15 000+ → 50 000

Maintenance Plants

20 +

Supporting all brownfield and greenfield assets

3rd party monitoring

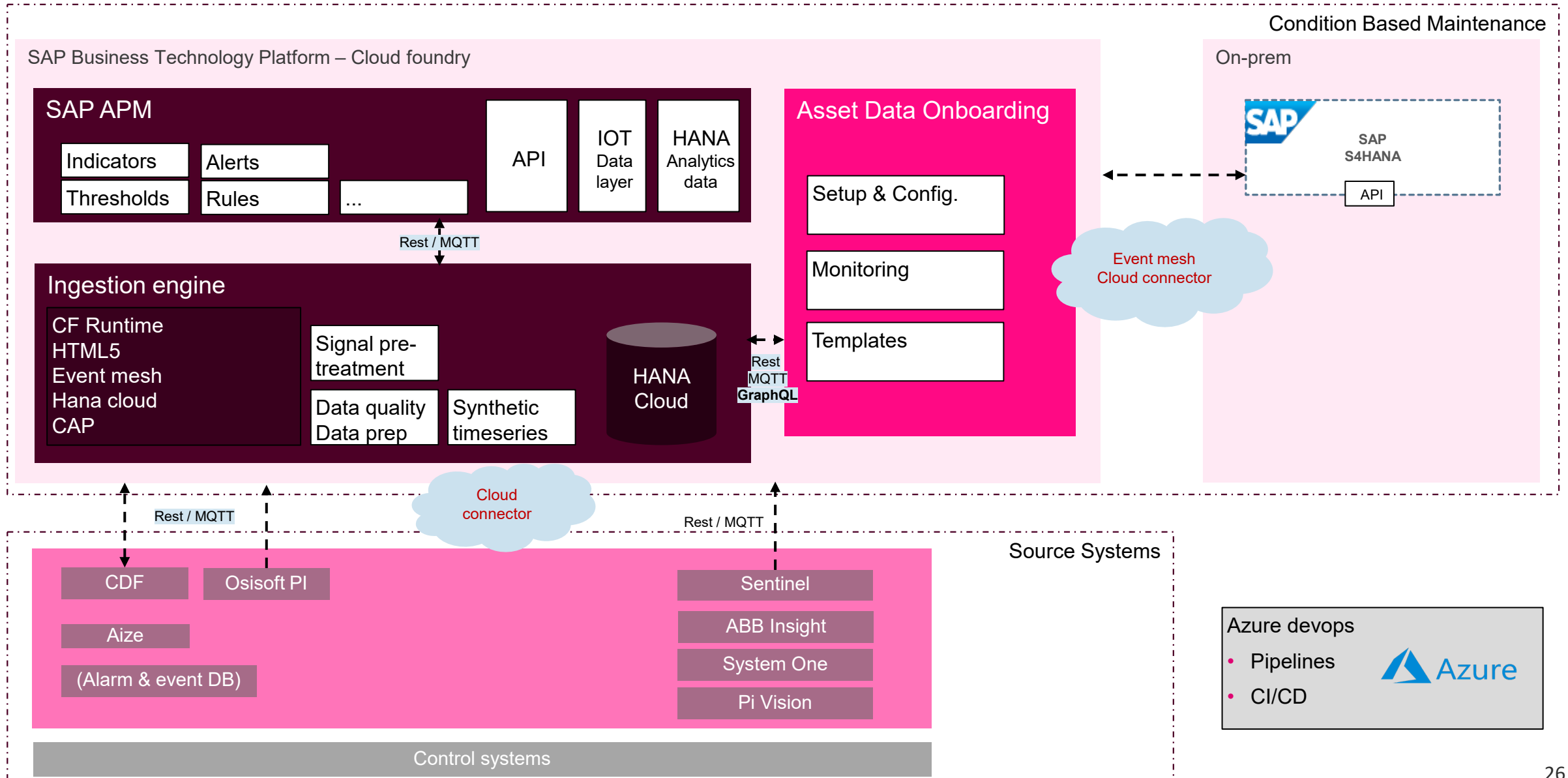
~10 000 → 50 000

Objects monitored via external systems

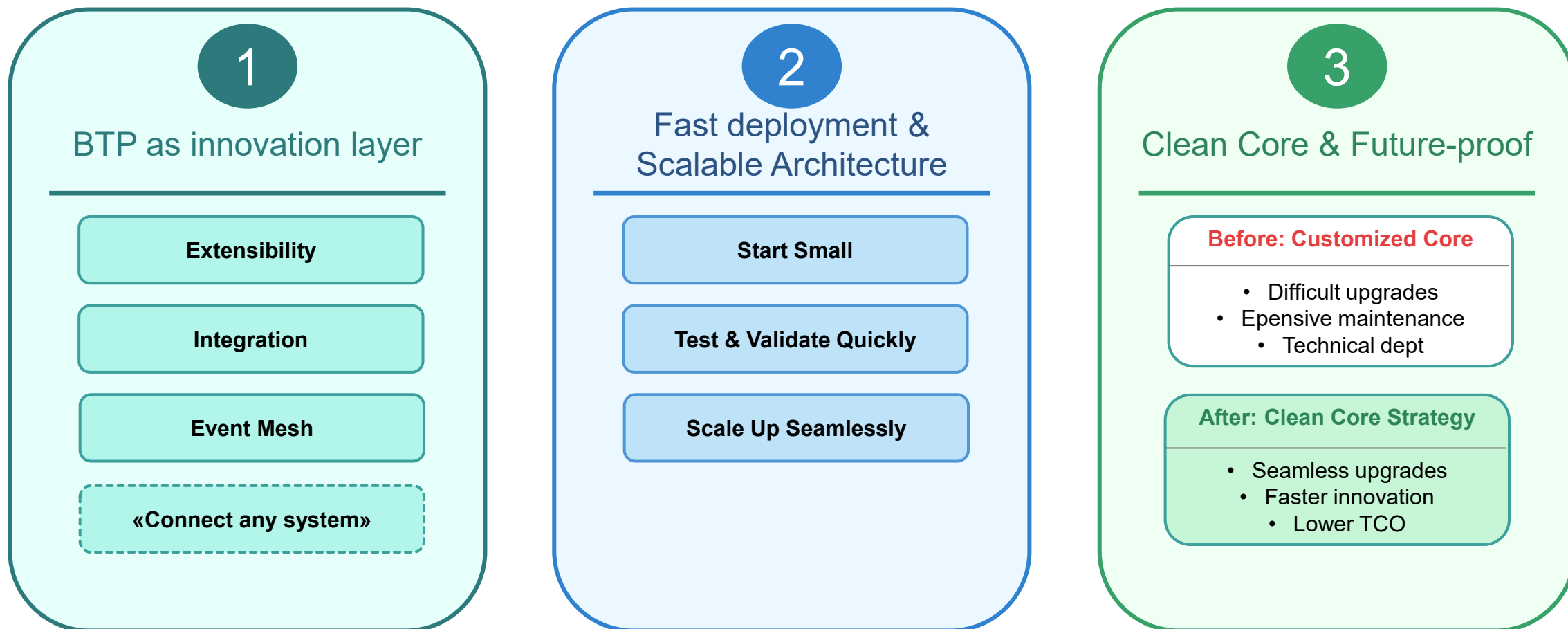
Flatlining / Out of range

~10 000 → 50 000

Technical Architecture



Key Concepts: BTP as an innovation platform



PoC Timeline: 90 Days Execution Plan



Content

- Discovery workshop
- Deploy APM & Configure environment
- Connect to ECC or S/4HANA
- Connect customer data sources (IoT, time series data, 3rd party expert systems)

- Workshop to define PoC monitoring scenario
- Weekly Q&A and demo workshop
- Creation of necessary extensions

- Review insights & findings
- Deliver gap analysis including strategy to close gaps
- Present roadmap for implementation

Week 1-3

Week 4-8

Week 9-12

THANK YOU

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